



PHILIPS



Office Lighting

featuring X-tend luminaires

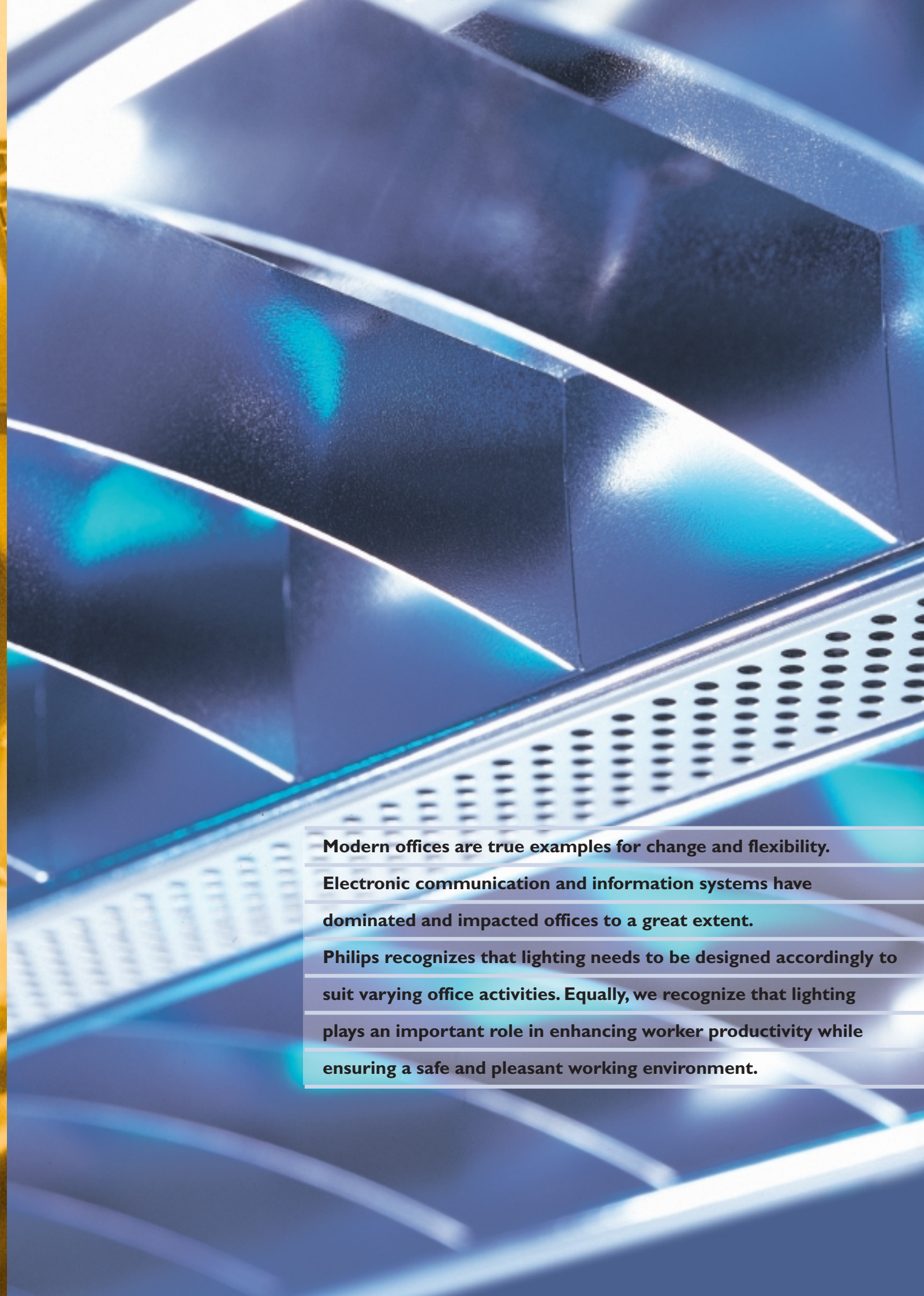


lighting solutions that really last



The MASTER Collection – Lighting solutions that make business sense.

Offering best in class energy efficiency, lifetime reliability and lighting quality, Philips MASTER Collection lamps, luminaires and control gears minimise your lighting solution's total cost of ownership. They also provide a major boost for your staff morale and productivity levels. You can start enjoying significant savings and benefits from day one by replacing your conventional lighting products with Philips MASTER Collection upgrades. You can achieve even more dramatic savings and improvements by switching your whole lighting system to the Philips MASTER Collection.



Modern offices are true examples for change and flexibility.

Electronic communication and information systems have dominated and impacted offices to a great extent.

Philips recognizes that lighting needs to be designed accordingly to suit varying office activities. Equally, we recognize that lighting plays an important role in enhancing worker productivity while ensuring a safe and pleasant working environment.



creating an inviting work environment

offices for the people

Office workers today spend as much time interacting with clients, colleagues and computers as they do on traditional office work involving reading and writing. Each task has specific visual requirements.

As the marketplace becomes increasingly competitive, there is growing awareness of the need for our working environment to evolve and keep pace with the changing dynamics of the organization. This means providing, for example, quiet zones for reflection and concentration, and zones for communication. It also means offering a positive and constructive ambience - an attractive working environment for the people.

Light at work

Office lighting plays a key role in creating a working environment that empowers, allowing people to function to the very best of their abilities. Lighting as a discreet presence that integrates seamlessly with the architectural framework to deliver multiple-lighting effects that help to bring people's working environment to life. We at Philips believe in this concept, as it focuses on people.

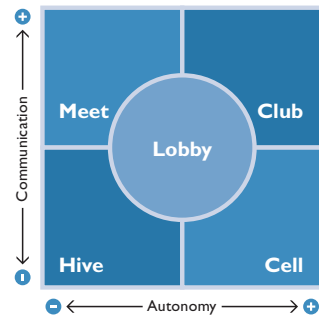
As every company differs in structure and organization, so does the emphasis put on each specific activity. The result is that individual workstations have to meet different requirements. Conversely, irrespective of the requirements, a number of basic human needs have to be taken into account in the design of office workstations.

These human needs reflect a person's desire for:

- Orientation in space and time
- Privacy and communication
- Information and familiarity
- Variation and surprise

These needs can be incorporated into a scheme for lighting designers i.e. the seven guiding principles of lighting design:

- 1 *The lighting should facilitate orientation and definition of a person's location in space and time.*
- 2 *Lighting should be an integral part of the architecture and interior design, planned from the beginning and not added as an afterthought. Through the choice of form, colour and material and in its design and details, lighting should support the intentions of the architecture and interior design rather than function independently*
- 3 *Lighting should create a mood and atmosphere that meets people's demands and expectation*
- 4 *Lighting should facilitate and promote communication among people.*
- 5 *Lighting should make a statement and convey a message over and above mere brightness.*
- 6 *Lighting should be original in its basic forms of expression; it should not be a mass product that simply reproduces what already exists.*
- 7 *Last but not least, lighting should also facilitate perception and recognition of people's surroundings.*

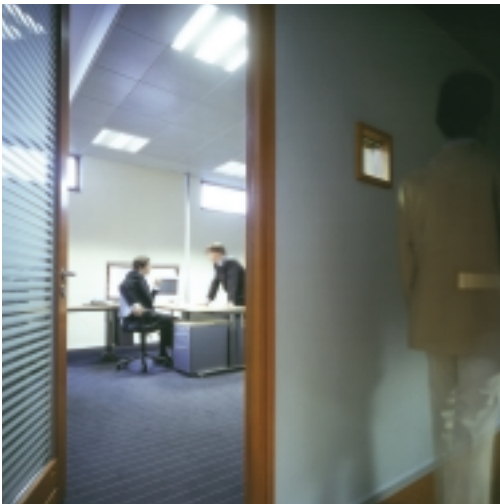


Philips Lighting developed a single office model that clearly classified all offices according to their function. This model enables the lighting and lighting hardware to be defined in order to satisfy the requirements of the organization. The five office functions defined in the model are Lobby, Meet, Cell, Hive and Club.



Lobby
Offices which are classified under the lobby function operate as the passageways connecting the various areas and departments in an office. They are used by all employees but communication is usually superficial and relatively unconnected to work. The Lobby is a place which can be used to relax in. The lighting of such areas can help to create a place where people feel comfortable. Using lighting control systems, different atmospheres can be created to suit different times of the day.

Meet
An area with a Meet function is intended for intensive communication. These areas are set up for employees who work together and where communication is essential. Diffused lighting is used for group meetings, where the expression on the faces should be pleasantly visible. Light is focused on the desk for meetings where concentration is the main issue.



Cell
An office with a Cell function has a quiet, relaxing atmosphere, and accommodates employees who operate individually, carrying out work that requires a high degree of concentration. A standard Cell office requires general lighting, while a more luxurious manager's office may need a split lighting system (via general lighting as well as task and ambience lighting). Aspects such as flexibility, aesthetics and personal preference/control are also important considerations.

Hive
The Hive function is named after a beehive, as it is an area full of activity. And just like a beehive, individual work is carried out, but they are all part of a single process. Uniform lighting is desirable in a Hive system so as to afford full flexibility in the placement and orientation of desks. Low-brightness luminaires can be employed to avoid reflections in computer screens and the effect of sun screening and indirect lighting in combination with daylight-linked control systems.



Club
Club offices combine activities that demand concentration and communication. Employees here often work on multi-disciplinary projects in teams set apart from other office organizations. It is possible to light a Club area with uniform general lighting, similar to that usually found in a Hive. However, to really underline this concept with its dedicated workstations, the lighting systems can be separated. For example, the workstations and the space can be illuminated. A brighter, higher and bigger space can be created with architectural lighting in the form of coves, with accents providing the correct visual ambience.

Introducing Philips X-tend
To facilitate such varying requirements in office lighting, Philips brings you X-tend, a new generation of fluorescent luminaires designed to provide optimum lighting for just about any work environment. X-tend far surpasses the competition with its excellent lighting qualities while meeting the aesthetic standards of the times.



Philips' X-tend has the perfect combination of cutting-edge technology, functional brilliance and aesthetic appeal. The secret behind X-tend's superb lighting qualities lies in Philips' newly developed optic concept, based on specially designed 3 dimensional curves that offer highly efficient light distribution. There are six types of optics and two types of covers suitable for most indoor lighting applications. With a 75mm height, X-tend luminaires meets most ceiling void restrictions, allowing architects and engineers ultimate design flexibility.

all-round performer

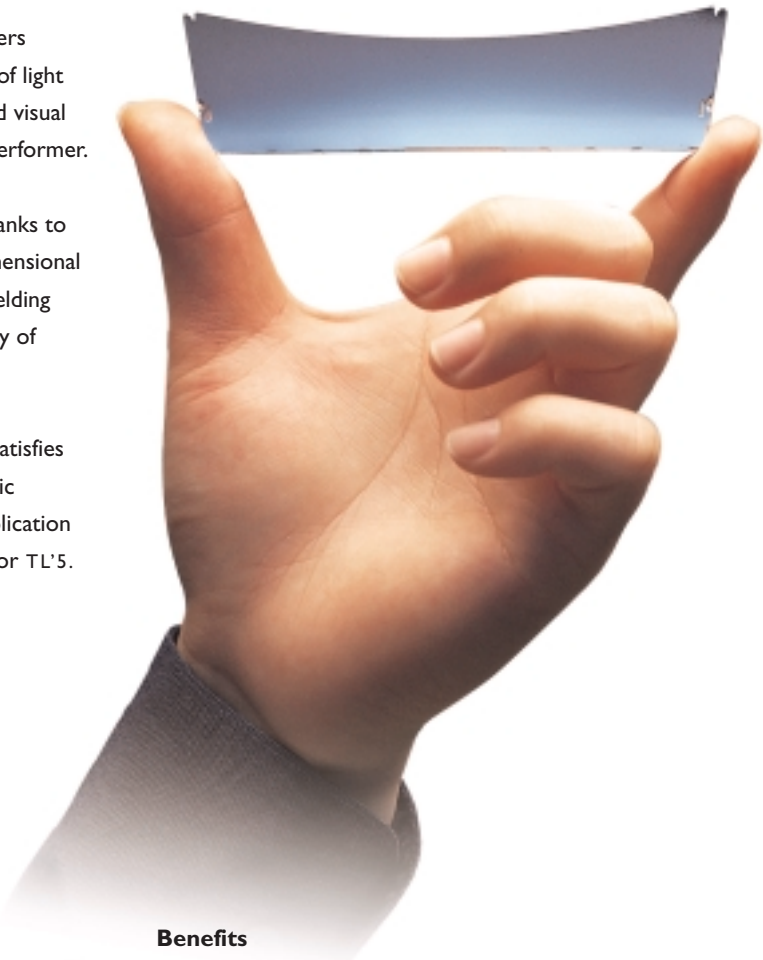
revolutionising office lighting

Philips X-tend family of luminaires is ideal for a variety of public and professional environments. Combining an attractive visual appearance with outstanding lighting performance, X-tend meets all the demands of the rapidly changing lighting market.

The innovative new range of optics offers maximum freedom of choice in terms of light distribution, efficiency, glare control and visual comfort, making X-tend an all-round performer.

Perfect light distribution is achieved thanks to the unique shape of the X-tend's 3-dimensional lamella. By avoiding all unnecessary shielding of light, we have increased the efficiency of our luminaires.

And because it is so versatile, X-tend satisfies application needs in offices, shops, public spaces and industrial premises. The application needs are optimized with either TL'D or TL'S.



Benefits

- Lower installation cost, lower electricity consumption and maintenance cost due to reduction of luminaires required
- 25% less energy consumption with TL'S lamps compared to conventional TL'D systems
- Optimum glare control for improved visual comfort. Hence, better working conditions to increase staff productivity
- Wide selection of optics allows for customization to meet specific office needs
- Safety and protection in case of power failure for customer peace of mind
- Intelligent lighting management, saves time and money
- Suitable for different ceiling systems
- Easy maintenance with Philips V-clip

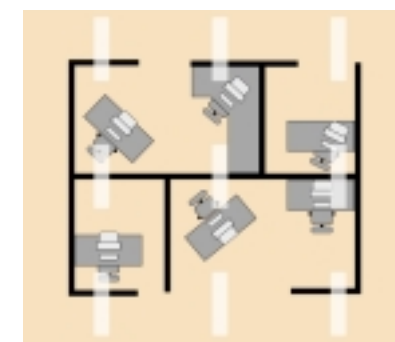
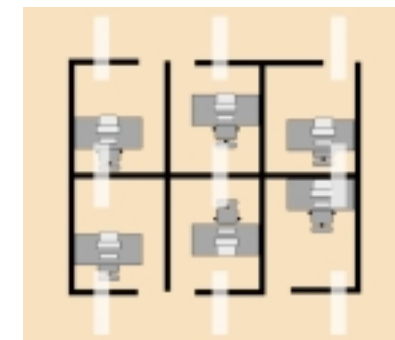
Most conventional office luminaires allow for glare which causes discomfort and can even impair work performance when one is exposed to it for long periods.



improved visual comfort

Within the office environment, X-tend OLC optics provides optimal lighting minus the visual and physical dominance from traditional fluorescent lighting.

The OLC optics is a unique 3D optical system that provides optimal glare control. Uneven light distribution and patch luminance is totally eliminated all-round, without compromising on optical efficiency. This provides greater freedom in interior design. The office layout does not depend on the arrangement of the lighting installation or vice versa.



Greater flexibility

The office layout does not depend on the lighting installation or vice versa

Improved lamp shielding

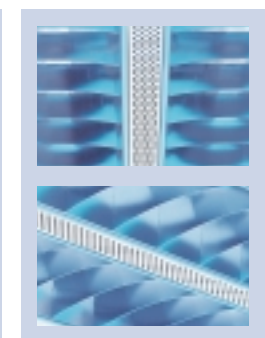
Another unique feature of the X-tend family is the flat lamella with a concave contour. It is specially designed so there is an all-around cut-off angle which provides improved lamp shielding, compared to the current generation of cross-lamellae. The undulating wave design of the flat lamella profile disseminates a soft, glowing light without any harsh, bright spots.

Benefits

- Higher efficiency
- Pleasant brightness
- Distinguished and prestigious look



Conventional luminaire



X-tend luminaire

Without compromising on visibility, Philips' X-tend luminaire family complies with international glare norms to ensure visual comfort. The optimised end reflector is designed to prevent direct glare caused by light spots.

Delta

Delta-shaped beam for uniform light distribution. All 'TL' optics provide uniform illuminance levels and thus are ideal for general lighting of large and small offices, but also shops, making it possible to limit the number of luminaires installed, while proving the best uniformity and light distribution can give.

Direct/Indirect

Direct and Indirect beam provides uniform illuminance for work level which gives a brighter overall ambience to improve working condition. Not only ideal for lobbies, corridors, conference rooms, and reception areas, it is also suitable for shops.

Bi-directional

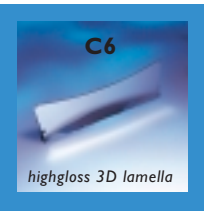
Bi-directional light distribution for illuminating products on gondolas. Efficiency and excellent beam control make these optics suitable for vertical displays, e.g. on gondolas. Bi-directional optics are available in 30 and 40 versions. In general, version 40 is for higher gondolas or when the retailer wants more illuminance on the upper part of the gondola. Light-technical calculations should be made to enable a specific choice to be made.

Asymmetric

Asymmetric light distribution for illuminating products on wall racks. The asymmetric optics are suitable for illuminating wall racks evenly from top to bottom, with a maximum intensity above eye level.

	TL'S		TL'D			TL'S		TL'D			TL'S		TL'D			TL'S		TL'D		
	83% <small>(with top reflector)</small>	78%	75% <small>(with top reflector)</small>	70%		55%	52%	83% <small>(with top reflector)</small>	78%		75%	70%	83% <small>(with top reflector)</small>	78%		75%	70%			
Offices*																				
hive	D6 M6 C6		D6 M6 C6																	
cell		D6 M6 C6		D6 M6 C6		C6 D6	M6 D6													
meet		D6 M6 C6		D6 M6 C6			MD								AD6				AM6	
lobby						MD									AD6				AM6	
Shops																				
gondolas											C6 D6		M6 D6		AD6 AM6				AM2	
general	M6 D6		M6 D6			C6 D6	M6 D6													
wall light																				
cash area		M6 D6		M2		MD	MD								AD6 AM6				AM2	
Industry																				
open space	D6 C6		D6 C6																	
assembly																AD6			AM2	
Schools																				
corridor						C6 D6	M6 D6													
classes	M2		M2																	
board lighting																			AM2	

* explanation of terminology used for office types:
hive: open plan office: help desk, call centres
cell: individual rooms: business office
meet: meeting/conference room, reception desk, video conference room
lobby: corridors, entrance, atrium, staircase, pantry or recreational area



The D6 and C6 optic complies with CAT 2
M6 optic complies with CAT 3

Norms and approval

All luminaires fully comply with safety norms according to IEC 598/ENEC 60598. They also provide protection against flammability ∇ .

Flexibility

In modern offices, different tasks offer challenging demands for illumination, glare limitation, luminance distribution and good aesthetics. With such a wide range of optics available, X-tend luminaires' modular system guarantees high flexibility when it comes to applications. All rooms can be equipped with the same X-tend recessed luminaire housing. Depending on the application of the room, appropriate optics can be mounted. Should the visual tasks or room dimensions change at a later stage, the new design demands can be met simply by exchanging the optics. Solutions for PL-L lamps, emergency lighting, remote control and extended versions are available upon request.

Reduced luminaire height

The new generation of the X-tend luminaire system for recessed mounting is characterised by a particularly low installation height of 75 mm.

Benefits:

- Easy installation and maintenance
- Lower transportation cost
- Lower inventory cost
- Design flexibility
- Environment-friendly

Gear

Philips' X-tend luminaires are equipped with electrical gear in HF, HF-regulated, inductive and capacitive versions. The selection of low-loss electromagnetic and HF gears is applicable to the latest lighting control technology used in building management systems.

Installation

Mechanical Aspects

In ceiling systems with visible supporting profiles, the luminaire can be attached to the profile flange. In ceiling systems with concealed substructure, the same luminaires are attached using universal mounting brackets. With the use of a special suspension hook or chain, it is possible to fix the luminaire to the concrete ceiling.

Electrical Aspects

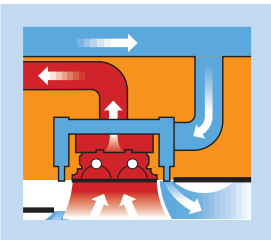
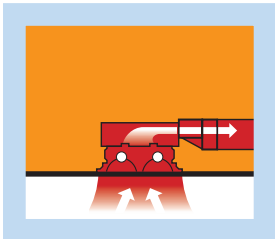
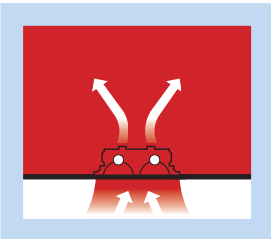
Connection of mains supply to the connection block is possible via a cable entrance on the top of the luminaire, and uses a standard 3-pole connection block.

Air-handling capability

The integration of lighting and air-handling offers numerous benefits. All luminaires and most diffusers in the X-tend range are suitable for use this way. This also applies to the products in the strip ceiling luminaires range.

Benefits:

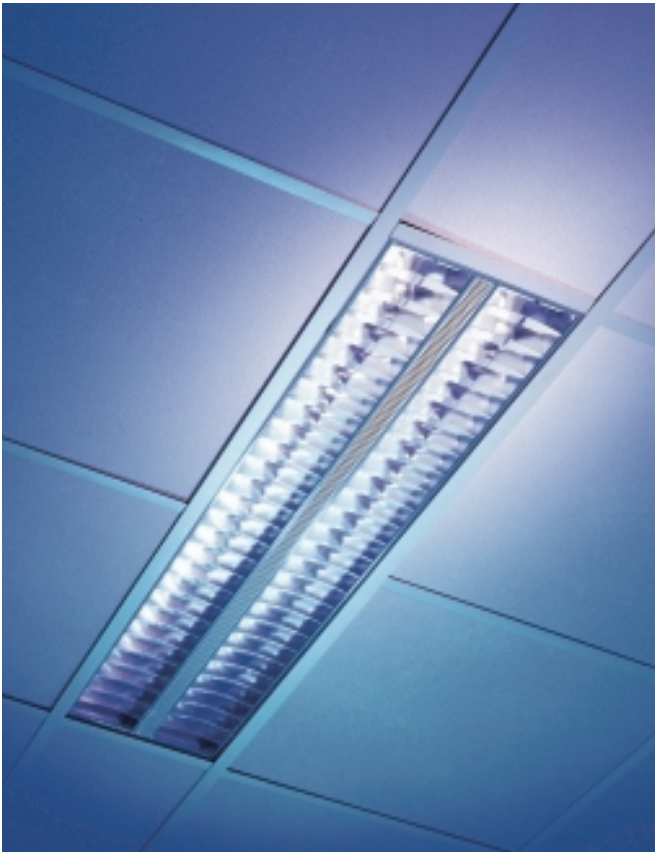
- Optimised light output
- Enhanced working environment
- Attractive interior design
- Suitable for plenum extraction
- Feasible for combining air supply panel



TCS 398



TBS 369



the optics range

Dedicated top reflector for delta, asymmetric and bi-directional light distributions. Available in high-gloss for increased efficiency.

decorative plate

The form of the lamellae provides a delta-shape light distribution, ensuring uniform lighting in all room configurations.

MD decorative greenish lamella

M2 profiled lamella with undulating wave

matt

semi-gloss

high-gloss

C6 high-gloss

D6 semi-gloss

M6 matt

The form of all side screens in combination with the end reflector provides a delta-shape distribution, ensuring uniform lighting both lengthwise and crosswise in relation to the luminaire.

The form of all lamellae provides a delta-shape light distribution, ensuring uniform lighting in all room configurations plus optimal glare control.



luminaire specification

	Basic luminaire	Lamp	Gear	Optics	Dimensions LxWxH (mm)	Packing weight (g)	Packing Unit	Ordering Number
Recessed Mounted System	TBS 369	2xTL'D-36W	IC	M6	126x31x10	6.70	1	910401992380
		3xTL'D-36W			126x62x10	10.5		910401992480
		3xTL'D-18W			66x62x10	5.8		910401992580
		4xTL'D-18W			66x62x10	5.8		910401992680
		2xTL'D-36W		D6	126x31x10	6.7		910401992880
		3xTL'D-36W			126x62x10	10.5		910401992980
		3xTL'D-18W			66x62x10	5.8		910401993080
		4xTL'D-18W			66x62x10	5.8		910401993180
		2xTL'D-36W		C6	126x31x10	6.7		910401651080
		3xTL'D-36W			126x62x10	10.5		910401651180
		3xTL'D-18W			66x62x10	5.8		910401650880
		4xTL'D-18W			66x62x10	5.8		910401650980
		2xTL'D-36W	HFE	M6	126x31x10	6.3		910401992080
		3xTL'D-36W			126x62x10	9.7		910401991980
		3xTL'D-18W			66x62x10	5.4		910401991880
		4xTL'D-18W			66x62x10	5.4		910401992780
		2xTL'D-36W		D6	126x31x10	6.3		910401993280
		3xTL'D-36W			126x62x10	9.7		910401993380
		3xTL'D-18W			66x62x10	5.4		910401993480
		4xTL'D-18W			66x62x10	5.4		910401993580
		2xTL'D-36W		C6	126x31x10	6.3		910401651480
		3xTL'D-36W			126x62x10	9.7		910401651580
		3xTL'D-18W			66x62x10	5.4		910401651280
		4xTL'D-18W			66x62x10	5.4		910401651380

	Basic luminaire	Lamp	Gear	Optics	Dimensions LxWxH (mm)	Packing weight (g)	Packing Unit	Ordering Number
Recessed Mounted System	TBS 669	2xTL'5-28W	HFP	M6	126x31x7	6.5	1	910400779374
		3xTL'5-28W			126x62x7	10		910400779974
		3xTL'5-14W			65x62x7	6		910400779874
		4xTL'5-14W			65x62x7	6		910400780174
		2xTL'5-28W			126x31x7	6		910400776874
		3xTL'5-28W		D6	126x62x7	10		910401651680
		3xTL'5-14W			65x62x7	6		910400777474
		4xTL'5-14W			65x62x7	6		910400777374
		2xTL'5-28W			126x31x7	6		910400776974
		3xTL'5-28W			126x62x7	10		910400790974
		3xTL'5-14W		C6	65x62x7	6		910400779774
		4xTL'5-14W			65x62x7	6		910400780074

	Basic luminaire	Lamp	Gear	Optics	Dimensions LxWxH (mm)	Packing weight (g)	Packing Unit	Ordering Number
Suspended System	TPS 498	2xTL'D-36W	HFE	C6	1350x260x90	5.00	1	9104 033 00680
		2xTL'D-58W			1650x260x90	5.80		9104 033 00880
		2xTL'D-36W		D6	1350x260x90	5.00		9104 033 01280
		2xTL'D-58W			1650x260x90	5.80		9104 033 01480
		2xTL'D-36W		M6	1350x260x90	5.00		9104 033 00080
		2xTL'D-58W			1650x260x90	5.80		9104 033 00280
		2xTL'5-28W		C6	1300x260x90	4.80		9104 033 01180
		2xTL'D-36W			1350x260x90	5.00		9104 033 00780
		2xTL'D-58W	HFP		1650x260x90	5.80		9104 033 00980
		2xTL'5-28W			1300x260x90	4.80		9104 033 01780
		2xTL'D-36W			1350x260x90	5.00		9104 033 01380
		2xTL'D-58W			1650x260x90	5.80		9104 033 01580
		2xTL'5-28W		M6	1300x260x90	4.80		9104 033 00580
		2xTL'D-36W			1350x260x90	5.00		9104 033 00180
		2xTL'D-58W			1650x260x90	5.80		9104 033 00380

	Basic luminaire	Lamp	Gear	Optics	Ordering Number
Surface Mounted System	TCS 398	3xTL'D-18W	HFP	M6	9104 033 06980
		1xTL'D-36W			9104 033 07080
		2xTL'D-36W			9104 033 07180
		1xTL'D-58W			9104 033 07280
		2xTL'D-58W			9104 033 07380
		3xTL'D-18W		D6	9104 033 07580
		1xTL'D-36W			9104 033 07680
		2xTL'D-36W			9104 033 07780
		1xTL'D-58W			9104 033 07880
		2xTL'D-58W			9104 033 07980
		3xTL'D-18W		C6	9104 033 08180
		1xTL'D-36W			9104 033 08280
		2xTL'D-36W			9104 033 08380
		1xTL'D-58W			9104 033 08480
		2xTL'D-58W			9104 033 08580
		3xTL'5-14W		M6	9104 033 08780
		1xTL'5-28W			9104 033 08880
		2xTL'5-28W			9104 033 08980
		1xTL'5-35W			9104 033 09080
		2xTL'5-35W			9104 033 09180
		3xTL'5-14W		D6	9104 033 09380
		1xTL'5-28W			9104 033 09480
		2xTL'5-28W			9104 033 09580
		1xTL'5-35W			9104 033 09680
		2xTL'5-35W			9104 033 09780
		3xTL'5-14W		C6	9104 033 09980
		1xTL'5-28W			9104 033 10080
		2xTL'5-28W			9104 033 10180
		1xTL'5-35W			9104 033 10280
		2xTL'5-35W			9104 033 10380

Optional features

Standard features are included in the resulting type number of the luminaire specification. Please specify optional features separately.

		Lamps/ light colour	Starter	Fuse	Emergency lighting	Lighting control	Top reflector	Protection foil
TL'D	Standard features	no	no	no	no	no	no	no
	Optional features	827 830 840	electronic re-settable	yes	1hr 2hrs 3hrs	Luxsense	standard	yes

		Lamps/ light colour	Fuse	Emergency lighting	Lighting control	Top reflector	Protection foil
TL'5	Standard features	no	no	no	no	no	no
	Optional features	827 830 840	yes	1hr 2hrs 3hrs	Luxsense	standard	yes

Notes:
TCS 398/TPS498 will be available from September 2003.
Luxsense only available in combination with HFR.
The luminaire specification sheet above is an overview, showing a wide offer of standard and optional features.
This selection matrix shows most of the possibilities, so for ordering allow your specification to be confirmed by a quotation.
Specifications subject to modification without prior notice.



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